

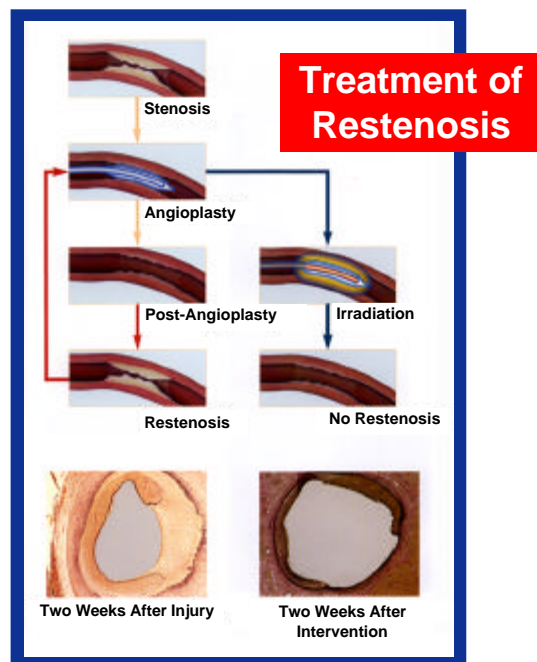
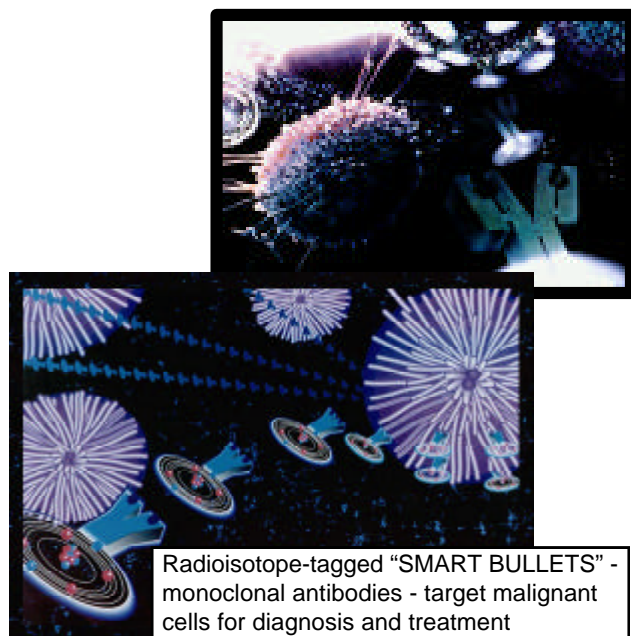
Medical Isotope Program Advanced Nuclear Medicine Initiative

January 2002

What is the Advanced Nuclear Medicine Initiative?

The Department of Energy, through the Office of Nuclear Energy, Science and Technology's Office of Isotopes for Medicine and Science, sponsors the Advanced Nuclear Medicine Initiative. The initiative is designed to apply the Department's unique expertise and capabilities in isotopes to advance nuclear medicine technology in the United States. Three major elements define the Advanced Nuclear Medicine Initiative:

- **Sponsor nuclear medical science using a peer review selection process.** The Department of Energy support is provided in two forms: direct research grants and making isotopes available for research at prices that researchers can afford;
- **Enhance the Nation's educational infrastructure.** Through this program, the Department encourages the training of individuals in nuclear medicine methods by providing curriculum development grants, establishing university scholarships and fellowships for nuclear medicine specialists and by sponsoring summer internships at appropriate institutions;
- **Continue a focused program in the U.S. to support research applications using isotopes, in particular alpha-emitting isotopes.** Early research indicates that a number of isotopes may be valuable tools in the fight against a spectrum of malignant diseases including most common cancers and infectious diseases such as meningitis.



Why is the Advanced Nuclear Medicine Initiative needed?

Nuclear medicine experts inside and outside the Federal Government have long proposed the establishment of an Advanced Nuclear Medicine Initiative within the Department of Energy's Office of Isotopes for Medicine and Science. This initiative provides important, peer-reviewed support to U.S. research in nuclear medicine diagnosis and therapy and promotes the study of nuclear medicine.

The Advanced Nuclear Medicine Initiative sponsors research into methods of producing and linking radioactive isotopes to chemical substrates which will then deliver the isotope to a diseased cell. When the isotope decays, it can destroy the diseased cell without affecting surrounding cells, thereby reducing deleterious side effects. These methods have been used to combat acute myelogenous leukemia and metastatic bone cancer. The use of radioactive isotopes during balloon angioplasty has proven to be effective against the reclogging of the blood vessels (restenosis).

The Advanced Nuclear Medicine Initiative helps to support the research needed to discover similar methods and procedures to combat a wide variety of diseases.

The first solicitation of applications under the Advanced Nuclear Medicine Initiative was made in fiscal year 2000. In response, 64 applications for assistance were received from a wide range of research institutions. Given the limited

funding available, nine research grants were made in September, 2000 to the Garden State Cancer Center, Oak Ridge National Laboratory, Regents of the University of Michigan, University of Chicago, University of California Davis, University of Washington, Westinghouse Electric Company LLC, and two awards to the Curators of the University of Missouri. The five educational grants to support nuclear medicine disciplines at universities and colleges were made in March 2001 to Washington University, Purdue University, University of New Mexico Health Sciences, Regents of the University of Wisconsin System, and Washington State University.

The Advanced Nuclear Medicine Initiative program was initiated with fiscal year 2000 funds. Each grant was awarded for a period of three years. No new funds were requested for the program in fiscal year 2003. However, research initiated with fiscal year 2000 funds will be concluded in fiscal year 2003 using fiscal year 2002 funds.



*Electroplating Cell Used to Produce Th-229 Electrodeposits
Westinghouse Electric Company LLC ANMI Research Grant*

Program Budget ANMI (\$ in Millions)		
FY 2001 <u>Appropriation</u>	FY 2002 <u>Appropriation</u>	FY 2003 <u>Request</u>
\$2.5	\$2.5	\$0.0

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